

Content Analysis of the EFL Textbook Units According to Bloom's Taxonomy: Between Theory and Practice

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This study analyzed the units of the textbook "Just Imagine" for 9th grade Arab students for English teaching in Israel. The study was conducted to understand whether the Wh-Questions used in the textbook emphasized high-level thinking and cognitive skills development (HOTS). The research question of this study was: To what extent do the Wh-Questions in the textbook "Just Imagine" emphasize higher order thinking skills? Content Analysis was performed. Wh-Questions were chosen as the unit of analysis for this research. Percentages and frequencies of each cognition level were calculated for each book unit separately. The results showed that 167 out of the 219 questions emphasized cognition levels that develop Low-Order Thinking Skills, while only 52 questions emphasized the three levels that use High-Order Thinking Skills. Findings of this research recommended that the textbook authors should further develop the textbook's content, and maintain a balance between the lower-order and higher-order questions. Evaluating and choosing a good textbook that fits the goals of the curriculum is also recommended.

Keywords: EFL textbooks, Just Imagine, Bloom's taxonomy, content analysis, WH-Questions

INTRODUCTION

English teachers in the Arab community in Israel view EFL textbooks as the main source material for the education process. This might be attributed to the fact that English is not their native language, making them more dependent on educational aids such as textbooks. Even those who prepare their class content may lack the confidence to reach a teaching level that suits the standards for teaching English as a foreign language (Igbaria, 2013).

EFL teachers usually select the most suitable textbook that answers their students' needs and level of linguistic ability to use in their classrooms. With this perspective in mind, the current research analyzes the EFL textbook "Just Imagine" for 9th Grade" by Harriet Coddington, published in 2015, for ninth grade EFL students in Israel.

The lack of adequate EFL textbooks is further exacerbated, according to Igbaria (2013), when we realize that most teachers who speak English as a foreign language do not possess the ability to develop their own learning material. Many EFL teachers are restricted to the textbook and teach it from cover to cover, becoming completely dependent on the text to provide students with sufficient content to help develop their thinking and learning skills. The results of the Igbaria's research (2013) implied that authors of new EFL textbooks might still be influenced by the old English curriculum for English instruction, which emphasized grammar and vocabulary). Such findings might indicate that this might be a fundamental problem, which prevails across the platform of EFL textbooks.

This study aims to discover to what extent the book achieves the goal of teaching Higher Order Thinking Skills. Therefore, this study's plan is to analyze all Wh-Questions in the book according to Bloom's taxonomy, and determine the extent to which the questions are varied for the six levels of the cognitive domain. More specifically, the study attempts to answer the question:

- To what extent do the Wh-Questions in the textbook "Just Imagine" for 9th-grade students emphasize higher-order thinking Skills?

The researcher chose Wh-Questions as the analysis unit of this research. A Wh-Question is a question beginning with a Wh-word such as who, what, which, where, when, and why. The answer to a Wh-Question corresponds to the Wh-word in the question.

Content Analysis of the "Just Imagine" for 9th-grade student's book was conducted to analyse the questions of the study units of the textbook based on the cognitive domains of Bloom's taxonomy. There are three domains in Bloom's taxonomy: cognitive, affective, and psychomotor. The present research used the cognitive domain as its main reference.

LITERATURE REVIEW

Textbook (EFL)

A textbook is one source of learning, and is a guide for students and teachers in supporting teaching and learning activities in the classroom based on the curriculum, and by students' learning needs. Textbooks are one of the basic tools teachers use in the teaching and learning process, and have an important role in learning a foreign language. Textbooks assist students in knowing and obtaining teaching materials easily, and, according to Çakit (2006), provide a basis upon which teaching and learning are founded. This role is fulfilled by providing a road map or syllabus for teachers' teaching and a self-study source for learners. According to Ur (1996), "Textbooks must have a clear form of activity, so the teacher and students know what will happen and understand what is done next, so that there is a change". Penny Ur also explained that textbooks have text and study assignments by their respective grade levels. It can be concluded that textbooks are sources and learning materials in the teaching and learning process in the classroom. Textbooks can help teachers prepare and develop teaching materials to be taught. Whereas for students, textbooks can help to find out how much and how far students have mastered the subject matter.

Textbooks have several advantages; namely, they process help of independent learning, are easy to perform, more varied, and increase comprehension (Kencana et al., 2022). Textbooks greatly impact learning outcomes, so teachers should be more selective in choosing textbooks. According to Ur (2002), a good textbook has several advantages: a clear layout, interesting themes and tasks, various themes and tasks, clear instructions, systematic syllabus, and the contents are arranged clearly and are graded or arranged based on complexity. Richards (2001) presents other advantages of textbooks: They provide a structure and a syllabus, preserve quality, supply learning resources, and can provide actual language models and input.

Moreover, Harmer (1996) explained, "A good textbook contains interesting material that provides development, and shows what needs to be learned and what has been learned." In addition, Harmer also explained that a good textbook is a textbook that helps relieve teachers from the difficulties of teaching material for each class. Textbooks play an important role in teaching English as a foreign language. Many teachers depend on them for guidance and support in classroom teaching, especially new teachers with less experience (Gómez Rodríguez, 2015). The same view has been shared by Kitao and Kitao (1997); namely that textbooks save the students from the danger of inexperienced teachers. Moreover, textbooks help the teachers save and spend time in worthwhile activities, and decrease occupational over-burden by yielding a respectable return on investment (Kencana et al., 2022; O'Neill, 1982; Sheldon, 1988).

Communicative textbooks employ a central place in teaching English as a Foreign Language (EFL) because many teachers depend on them as a basis for assisting learners in developing communicative skills: the ability to use language, convey messages and negotiate meaning with other speakers in social contexts of real life (Bachman, 1999; Kencana et al., 2022; Savignon, 2001). Textbooks include lists of communicative functions, grammar forms, and language skills to be practiced. Additionally, they display

communicative tasks that simulate or are genuine real-life situations. Tudor (2001) noted that the socio-cultural dimensions of communication and cultural content significantly interfere with the use of language. Therefore, culture in program design and teaching cannot be ignored.

Moreover, Amerian and Tajabadi (2020) indicate that textbooks that are used in foreign language instruction cannot be simply separated from cultural contexts, because the mere study of the abstract system of language does not equip learners with the required knowledge, skill, and attitudes to interact effectively and meaningfully in real situations. This is the premise of the intercultural approach that aims at developing learners' awareness of cultural issues.

From the explanation above, it can be concluded that the advantages of a good textbook vary. Textbooks must be suitable for learning objectives, interesting in layout, and include all four basic English skills in various forms of content and practice.

Empirical Studies on Textbook Analysis

The following literature review brings forward previous studies, which analysed EFL textbooks around the world. Some of these studies attempted to investigate the pedagogical elements present in EFL textbooks that encourage students to use high order thinking skills, while others provided content analysis that brings attention to some other prevailing pedagogical issues that exist in EFL textbooks.

Alul (2000) examined the English language textbook questions for the eighth grade in Palestine during the academic year 1999-2000. Results of the research revealed that there was, however, a preference to lower-level questions in the studied textbooks. Alul (2000) recommended conducting further research on English Petra textbooks for the other classes. She also recommended that the Palestinian curriculum authors improve their questioning methods in the new Palestinian curricula. Another study was conducted by Abu-Shehab, Khdaif, Abkal, and Mikhamar (2004), which investigated the types and levels of English teacher's questions that occurred during classroom observations and their percentages. The study findings showed that sample teachers (100%) asked knowledge questions, 45% asked synthesis questions, and 55% asked evaluation questions. Research conducted by Seif (2012) discussed the level of English reading exercises for Palestinian 8th grade students. The findings show that analytical reading skills get 51.92%, synthesis skills 41.35% and evaluation skills get 6.73%.

Furthermore, another research by Shen and Yodkhumlue (2012), rev revealed that teachers asked more low cognitive questions (79.2%) than higher ones (20.8%). Igbaria (2013) study concluded that the textbook "places emphasis mainly on the lower thinking processes of knowledge, comprehension and application". Igbaria and Assaly (2014) main findings show that most of the activities emphasized cognition levels representing Lower-Order Thinking Skills. This study sheds light on the important role of textbooks in developing cognitive skills among students in Israel.

Abdelrahman (2014) main results revealed that most of the questions were within the first two levels: remembering and understanding, and less for the other levels, which reflected the preponderance of the low-level question in the two investigated textbooks. In light of the results, the researcher recommended to improve the questions in the textbooks to cover the six levels of the new version of Bloom's taxonomy, and to train teachers and curriculum designers to use and write questions in that vein.

Alharbi's (2015) study used checklists to evaluate a textbook series taught in high schools in the Kingdom of Saudi Arabia, revealing several important factors necessary to enhance the quality of the textbook and the quality of EFL education in the KSA. The author recommended involving curriculum designers, teachers, and learners, whose participation could provide a broad and in-depth view of the material in the books.

Freahat and Al-Faoury (2015) analysed thinking levels of the reading comprehension questions in three books. The finding indicated that low-level questions were dominant in all three books. The researchers concluded that the reading material of the university textbook did not show a higher level of thinking. On the contrary, the reading content in the high school textbooks revealed more concentration on higher-level thinking questions. The researchers recommended that there should be more communication between secondary schools and universities to bridge the gap between them.

Olimat (2015) conducted a study evaluating a total of 1,121 questions in the Action Pack series of English language books for 7th, 8th, 9th and 10th graders according to Bloom's classification and to find the frequencies and ratios of questions in the six levels of the cognitive domain. Researchers analysed reading and listening questions in the textbooks. The results indicated that the textbook writer had focused on the lower thinking processes for comprehension, and the results showed that the distribution of questions at the level of knowledge was almost the same in the seventh, eighth and ninth grades, while it was higher in the tenth grade.

Ulum (2016) study revealed that the textbook had a shortage of using the higher-level cognitive skills. The questions mostly concentrated on low cognitive levels, covering knowledge and comprehension, at percentages of 51% and 49%, respectively. Karimi and Veisi (2016) investigated the impact of teaching critical thinking skills on reading comprehension of Iranian intermediate EFL learners. The results showed that teaching critical thinking skills affected reading comprehension positively. Lee (2016) obtained quantitative research revealed that students of different English abilities showed different kinds of learning difficulties, with wide variations not only in their mastery of question words, but also in their linguistic knowledge of the interrogative word order and the verb phrase structure.

Nayer Adli and Asgar Mahmoudi (2017) investigated the reading comprehension questions in EFL textbooks and their appropriateness to learners' levels. Their results indicated significant differences between the two proficiency levels in terms of question types in all categories except analysis and synthesis. To assess the overall proportions of question types in the textbooks, and to see if they were different from each other, a Kruskal-Wallis and the follow up Mann-Whitney U tests were used, which revealed significant differences between some pairs of categories of question types. It is believed that the results of this study can be useful by textbook writers and EFL teachers.

Apriani (2019) aimed to obtain empirical evidence from the distribution of higher order thinking skills based on the revised edition of Bloom's taxonomy on questions in reading exercises in the Pathway to English textbook used in Bengkulu in Indonesia for 10th grade high school students. The results showed that the distribution of Higher Order Thinking Skills in essay reading questions in the Pathway to English textbooks was low and unbalanced, because higher order thinking skills in the Pathway to English textbooks have fewer questions about reading essay practice questions, and less variation in Higher Order Thinking Skills. Igbaria and Ghanayem (2020) research results showed that 245 out of the 324 questions emphasized cognition levels that develop Lower Order Thinking Skills, while only 79 questions emphasized the three levels that use higher-order thinking Skills.

In the current study, the researcher focused on analysing Wh-Questions from reading exercises in the Just Imagine textbook for 9th grade students in Israel to examine the distribution of higher-order thinking Skills based on Bloom's taxonomy. The distribution of higher-order thinking Skills in reading practice can support students in improving critical thinking skills in every activity they may undertake. Also, it could help English teachers to select suitable English textbooks that develop students' thinking skills, and create questions in reading exercises. It can also be used by the government and book publishers to produce better reading materials and English textbooks.

Bloom's Taxonomy

Taxonomy is another word for classification. According to Gani et al. (2023) & Pratiwi (2015), taxonomy implies a hierarchy of classifications based on basic principles or rules. Bloom's taxonomy is a classification system for cognitive thinking skills. Bloom's taxonomy is the most widely applied one of the taxonomies used today. In 1956, Bloom et al. published their widely accepted taxonomy for classifying objectives and assessment items for education. Bloom divided the purpose of education into three domains: the cognitive domain, the affective domain, and the psychomotor domain. The cognitive domain encompasses intellectual activities; the affective domain involves attitudes; and the psychomotor domain includes actions. According to Airasian and Russell (2008), the most commonly taught and assessed educational objectives are those in the cognitive domain. According to Bloom et al. (1956), the cognitive domain involves knowledge and the development of intellectual skills.

The cognitive domain in the original taxonomy includes intellectual activities such as knowledge, comprehension, application, analysis, synthesis, and evaluation. In the original version of the taxonomy, the cognitive domains are divided into the following six levels of objectives (Bloom et al., 1956, p.204): **Knowledge:** Remember materials learned earlier. It may include recalling or reminding appropriate information. Knowledge is the lowest level of learning. **Comprehension:** The ability to understand the meaning of material. Comprehension can be demonstrated by translating materials from one form to another, interpreting materials, or predicting future trends. **Application:** The ability to use learned material in a new and concrete situation. The application of rules, methods, concepts, principles, laws, and theories is typical of the processes used in application. **Analysis:** The ability to break down material into its components so that relationships between parts can be analyzed and that basic organizational principles are recognized. **Synthesis:** The ability to resolve contradictions and to put parts together to form a new whole. Emphasis is upon the formulations of new patterns of structures. **Evaluation:** The ability to judge the value of materials collected for a specific purpose. Criteria are established as a basis for evaluation. This learning is the highest in the cognitive hierarchy, because it contains elements of all the other categories, plus conscious value judgments based on clearly defined criteria.

In the 1990s, Lorin Anderson, a former student of Benjamin S. Bloom, changed the cognitive domain of the learning taxonomy (Anderson & Bloom, 2013). Nayef, Yaacob, and Ismail (2013) argued that the revised Bloom's taxonomy reflects different forms of thinking, an active process requiring more accurate verbs. The new version of Bloom's Taxonomy became remembering, understanding, applying, analyzing, evaluating and creating (Abdulrahman, 2023; Muhayimana et al., 2022; Ulom, 2022).

In this study, the research analyzes the question aspect of textbooks to assess the importance of textbooks in developing students' thinking skills.

“Just Imagine” Textbook Main Characteristics

“Just Imagine” was written by Harriet Coddington, a non-Arab author and designer. It is for 9th grade students of English as a foreign language at the intermediate level, stage three. It is based on the Revised English Curriculum and as such incorporates task-based and communicative approaches to language learning with an eye toward developing Higher Order Thinking Skills. The book enables students to reach the standards the Ministry of Education sets, equipping them with the learning and thinking skills that the modern world demands (Abdulrahman, 2023, Coddington, 2015). “Just Imagine” contains five theme-based units. Each unit has three parts, each of which reflects and develops the theme of the unit. The content of these units was chosen according to the curriculum, while considering the interests of the students. The objective of the learning material in the various units is to enrich students' knowledge, while offering them an opportunity to relate to their own experiences. Each unit defines different social interaction skills, grammar, and vocabulary. The units' themes and social skills are as follow: Unit one: You've Got a Friend; Unit two: The Amazing Amazon; Unit three: Necessity is the mother of Invention; Unit four: Heroes and Heroines; Unit five: Treasure Under Your Feet.

Textbook Analysis, Evaluation and Selection

The question of whether and how to use textbooks in teaching English as a Second Language (EFL) has long been debated among professionals in the field. However, even with the development of new technologies enabling better quality material created by teachers, the demand for textbooks continues to grow, and the publishing industry responds with new series and textbooks every year. Teachers can use a textbook for various purposes: as a core resource, as a source of complementary material, as inspiration for classroom activities, and even as the curriculum itself. (Garinger, 2002).

The process of analysis, evaluation, and selection of textbooks is central in the educational system by researchers or professionals involved in educational practice. This process serves many learning and educational objectives, particularly that of improving teaching. Regarding choosing the most suitable ESL textbooks, Garinger (2002) proposed that analysis must be according to program issues and according to a process of broad to specific. According to Garinger, this process makes the selection clear and manageable. The quantity and quality of the book must be sufficient for both teachers and students. The textbook must

be able to motivate students and meet their needs and interests. She also adds that the rationale of the textbook must be clear and explicitly stated.

Textbook selection is the process that often follows the completion of the textbook evaluation process and completes it. In most cases it is the responsibility of the school and the teacher to choose the textbook that a particular class will use. Decisions about selection should be made carefully and systematically. The process itself requires some professional experience and knowledge in teaching and working with textbooks, as well as knowledge of the learners for whom the book is intended. However, situations where the teacher has all the required experience and knowledge are rare (Jašková, 2020; Wijanarko et al., 2021).

According to Miekley (2005) the quality of EFL reading textbooks has improved significantly in recent years, but the process of selecting an appropriate textbook has not become easier for most teachers. Program directors and classroom teachers are under pressure to adopt new reading textbooks fairly regularly, and often on short notice. While publishers' representatives may provide some informed assistance, their need to sell new products clearly influences their recommendations.

According to Ur (1996), researchers present a variety of methods for selecting textbooks, but in practice, the process is often based on personal preference, and may be affected by factors unrelated to pedagogy. Unfortunately, textbooks are often selected based upon the prestige of the author, the publisher, or marketing, rather than their pedagogical value (McGrath, 2006; Wijanarko et al., 2021).

Textbooks greatly impact the learning outcomes of the teaching and learning process, so teachers should evaluate the textbook before giving it to students as learning material. According to Harmer (1996), there are a few things to review when determining which parts of the textbook are insufficient:

- a. Changing textbook material with our own lessons that are easier to understand for students.
- b. Adding material to the textbook, if the lesson is less varied.
- c. Adjusting the material by rewriting or changing some of the activities in the book.

From the above explanation, it can be concluded that textbooks should be evaluated to obtain good classroom teaching and learning results. Teachers need to know that there is no best textbook for students. Hence, the teacher should not depend on textbooks, but instead create fun materials that match students' needs. According to Gani et. al. (1995), there are four criteria for evaluating textbooks:

- a. The objectives of the learning program must be by the needs of students.
- b. Must have benefits for the future; i.e., choosing textbooks that will help students to use language practically for their purposes.
- c. Must consider the needs of students, and must facilitate their learning process.
- d. Must have a clear role as support for learning.

Textbook evaluation helps student teachers to understand the learning material used in the educational system from close up, and increases their awareness of the various characteristics of textbooks. Learners have been the center of language instruction since 1970, and textbooks are resources in achieving aims and objectives in terms of learner needs (Kencana et al., Purwati & Munir, 2022). This method supported the issue of the use of textbooks in the educational system on condition that the textbook is suitable to the level and needs of the students. Brown (1995) claimed that textbooks should not determine the aims themselves (components of teaching and learning), but should serve the needs of teachers. He added that textbooks must serve the teacher and students, not determine or constitute the educational and learning objectives. This shows how important it is for the educational system to develop the issue of textbook evaluation in general and to develop overall criteria for evaluating textbooks in particular to ensure high-quality teaching.

Another reason for evaluating textbooks mentioned by Tomlinson (2011), Evaluation can be pre-used and accordingly, directed towards predictions of possible value. It can be used and, hence, concentrated on awareness, a description of what the learners are doing, and the materials being used. Panezai and Channa (2017) added that textbook evaluation is essential to provide quality education, since it helps to identify the strengths and shortcomings of the texts, tasks and exercises included in the textbooks. Shafiee (2012) believes that evaluation of the ELT materials highlights some qualifications of EFL teachers: It helps the teachers acquire knowledge and skills to adopt the most suitable book based on the learners' needs, and to adapt the textbook to the students' needs, as well as provide a precise evaluation of the materials. According to Ellis (1997) evaluation helps teachers in their personal and professional development. This is expressed

in the fact that teachers acquire and develop understanding regarding the nature of textbook material in a general manner, rather than impressionistic assessments. As a result, textbook evaluation promotes cooperation between teams of teachers from the aspect of action research, empowers their professionalism, and helps teachers improve.

In addition, Litz (2005) stated that textbook evaluation can be a valuable component of teacher training programs, because it serves the dual purpose of making student teachers aware of important features to look for in textbooks, while familiarizing them with a wide range of published language instruction materials. There are several methods of textbook evaluation. The most common method is the predictive or ‘pre-use’ evaluation method (Prucha, 1989). This method examines a textbook that is still unused for future performance. The second method is the ‘in-use’ method which examines materials that are currently in use. The third method is the retrospective or the ‘post-use’ method. This method is a reflective process examining materials that were used previously. These textbook evaluation methods help educators select the best textbooks and develop personally and professionally - resulting in better education, which is beneficial for teachers, students, parents and society in general. The present study is an “in-use” evaluation since it examines a textbook designed for 9th. Grade students that is already in use in the educational system in the Arab sector.

METHODOLOGY

This study adopts the qualitative and quantitative methodology, which aims to determine the degree to which the book *Just Imagine* for 9th grade encourages the students to use the higher-order thinking Skills that are classified in Bloom’s Taxonomy of Learning Domains, as required by the Pedagogical Horizons policy. The following research tools were created for analysing the problem mentioned earlier, pertaining to newly published EFL textbooks that do not conform to the educational guidelines of Pedagogical Horizons. According to a publication by the MoE for teachers and planners, newly written textbooks should devise a curriculum that develops thinking, contributes to a deeper understanding of content, constructs knowledge, fosters a high cognitive ability in a variety of contexts, and nurtures critical and creative thinking (Yoad, 2009).

The Research Material

The course book “*Just Imagine*” for heterogeneous 9th grade classes.

Data Collection and Analysis

The researcher collected all the Wh-Questions of the book and placed them in a chart. The research used tables with four columns for collecting the questions and recording the data (Appendix 1). The first column contained the serial number of the question, the second contained the question, and the third and fourth columns were used for recording the level of the question and the page number in the book on which the question appeared. The tables were also divided into six parts corresponding with the study units in the book. The researcher then analyzed the questions according to Bloom’s taxonomy. After categorizing the questions, the researcher calculated the percentage and frequency of each level of Bloom’s taxonomy for each unit of the book.

Research Tools

Qualitative analysis of the textbook was performed using Content Analysis. Content analysis is a simple research approach that is used to analyze books, documents, etc. Content analysis is a type of qualitative study, which is defined as “a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes and patterns” (Gani et al., 2023; Hsieh & Shannon, 2005). Further, it is systematic reading for making replicable and valid inferences from texts or other symbolic matters. The purpose of using content analysis as a research method is to provide new insights and increase the understanding of a specific phenomenon, and to gain a broader and

more condensed description of the phenomenon and to describe and quantify a phenomenon (Krippendorff, 2012).

Content analysis of the “Just Imagine for 9th Grade” student’s book was conducted to analyze the questions of the five units of the textbook based on the cognitive domains of Bloom’s taxonomy. The researcher used a guide Igarria (2013) created to divide the questions based on the cognitive domains of Bloom’s taxonomy. This guide included a description of the level of each question together with its criteria. This tool has been designed to allow the researcher and a second analyst to calculate the frequencies of each level of question in the textbook “Just Imagine for 9th Grade” students. The researcher created a list of the questions’ percentages and frequencies according to Bloom’s taxonomy. The percentages and frequencies were divided according to the book units, with totals for each unit.

Validity and Reliability of the Research Tools

A committee of experts were established and led by five judges from the Faculty of Education in Sakhnin College. The committee examined the definitions of the levels and assessed their compatibility with Bloom’s taxonomy. Subsequently, the judges reported that it was valid for this research. An inter-rater reliability test was conducted with the help of a second analyst. Both the researcher and the analyst categorized the questions according to Bloom’s taxonomy levels of cognitive domain. The researcher first analyzed the questions according to Bloom’s taxonomy. Then the researcher chose a random sample of 50 questions out of the 219 questions in the textbook. These questions were analyzed by the second analyst in addition to the researcher. Frequency of agreement and disagreement between the two analysts was calculated. Using these frequencies, the researcher calculated the consistency coefficient between these two analyses of the sample questions. 44 questions were agreed upon and 7 which were not agreed upon.

$$\text{Consistency Ratio} = \frac{\text{NO. of Coincident answers}}{\text{NO. of coincident answers} + \text{NO. of different answers}} * 100$$

$$\text{Consistency Ratio} = \frac{44}{44 + 7} * 100$$

$$\text{Consistency Ratio} = \frac{44}{51} * 100 = 86\%$$

This consistency ratio shows that the research tool is reliable and can be used to analyze all the textbook questions.

Procedure

The procedure of analysis was carried out in two stages. In the first stage, the researcher collected and sorted all questions that appear in the book, and placed them in the chart. The researcher then listed and analysed the questions according to Bloom’s taxonomy. In the second stage, the researcher calculated the percentage and frequencies of each cognitive level of Bloom’s taxonomy for each separate unit and for all units combined.

Examining the Wh-Questions in the book, and determining their cognitive level according to Bloom’s taxonomy, it should be clear whether or not the lesson plan in the book truly adheres to the new guidelines, and helps students develop high-level cognitive skills.

In summary, the results of this research were obtained using a ten-stage procedure:

1. Defining the research question.
2. Reviewing related literature.
3. Choosing the class and textbook.
4. Determining the unit of analysis (Wh-questions).
5. Collecting all the Wh-Questions from the textbook.
6. Preparing the research tool for analyzing the questions.
7. Establishing validity and reliability.
8. Analyzing the questions according to the six levels in Bloom’s taxonomy.

9. Counting the frequency for each of the six levels of cognitive domain in Bloom’s taxonomy.
10. Recording the data in tables (to be shown in the next chapter).

RESULTS AND DISCUSSION

This section presents and discusses the results obtained after analyzing the questions from “Just Imagine” textbook. This analysis was used to answer the research question: To what extent do the Wh-Questions in the textbook “Just Imagine” emphasize higher order thinking skills?

In order to answer the research question, the researcher analyzed all the textbook questions, and then collected the results.

There are five units with different themes and topics in the “Just Imagine” textbook. The “Just Imagine” textbook has a variety of exercises, including basic language skills (namely listening, speaking, reading, and writing), and there are also components of language, grammar and vocabulary. However, this research only focuses on Wh-Questions such as what, who, when, where, why, and how.

After analyzing all of the questions, a total of 219 questions (see Appendix 1) were obtained from the English textbook “Just Imagine”. The questions were distributed throughout the entire five units in the book. The results of this study are presented in **Table 1**, which shows the frequency and the percentage in the six levels of the cognitive domain for each of the five study units of the textbook. Appendix 2 provides examples of the six levels of Bloom’s taxonomy of the Wh-Questions in the textbook “Just Imagine for 9th Grade” students.

TABLE 1
FREQUENCIES AND PERCENTAGES OF THE WH-QUESTION IN THE SIX LEVELS OF
THE COGNITIVE DOMAIN IN BLOOM’S TAXONOMY FOR EACH LEARNING UNIT IN
THE “JUST IMAGINE FOR 9TH GRADE” TEXTBOOK

Percentage	Total	Unit Five	Unit Four	Unit Three	Unit Two	Unit One	Level of question
5%	10	3	1	1	1	4	Knowledge
66%	144	25	37	35	29	18	Comprehension
6%	13	5	1	2	0	5	Application
17%	38	8	6	8	8	8	Analysis
4%	9	2	0	0	1	6	Synthesis
2%	5	0	0	3	0	2	Evaluation
100%	219	43	45	49	39	43	Total

Table 1 shows reading comprehension questions in every unit of the book “Just Imagine” after categorizing them based on Bloom’s taxonomy. The researcher found that the most dominant cognitive dimension was comprehension. The frequency of comprehension was 144 out of 219 questions, and its percentage was 66%. Second was the analysis level with a frequency of 38 out of 219, equal to 17%. Third was the application level. The frequency of application was 13 out of 219, or 6%. The fourth level was knowledge with 10 out of 219 and a percentage of 5%. Synthesis level was 9 out of 219 questions with a percentage of 4%. The last level was the evaluation level, which occurred five times, or 2%.

The textbook is intended for heterogeneous classes with advanced, intermediate, and weak students. The author consequently chose to emphasize questions of the lower thinking processes to fit the average student – which is intermediate or weak.

The researcher obtained these results by thoroughly studying and learning the content of the textbook “Just Imagine” and listing all the Wh-Questions that appeared on each page. The analysis of the book began on page 112 and ended on page 176. The researcher collected 219 questions (Appendix 1), and then used the research tool to analyze the questions and calculate the percentage for each level of the cognitive domain

according to Bloom’s taxonomy. These same results are also presented in **Table 2** to show the frequencies and percentages of the Wh-Questions for the six levels of the cognitive domain in Bloom’s taxonomy in the entire textbook.

TABLE 2
TOTAL FREQUENCIES AND PERCENTAGES OF THE WH-QUESTIONS IN THE SIX LEVELS OF THE COGNITIVE DOMAIN IN BLOOM’S TAXONOMY IN THE “JUST IMAGINE FOR 9TH GRADE” TEXTBOOK

Percentage	Frequency	Level of question
5%	10	Knowledge
66%	144	Comprehension
6%	13	Application
17%	38	Analysis
4%	9	Synthesis
2%	5	Evaluation
100%	219	Total

Table 2 shows the frequencies and percentages of the six levels of cognitive domain in Bloom’s taxonomy. The frequencies in the table range from 38 to 144, while percentages range from 2% to 66%. The level that appeared most frequently was the comprehension level. This finding is not surprising since it confirms the results of almost all the other studies that were discussed in the literature review. Moreover, these results show that the authors of “Just Imagine” emphasized the lower thinking process of comprehension. These findings confirm that the “Just Imagine” textbook authors placed the most loads on the lower thinking levels of comprehension, since they are probably restricted to the students’ needs and levels. It was also found that these authors emphasized the comprehension levels because they know that the target audience is mid-level rather than high-level students.

Table 3 presents the total frequencies and percentage of HOTS and LOTS in Bloom’s taxonomy in the textbook “Just Imagine for the 9th Grade” students, clearly indicating that the majority of the questions (77%) promoted Lower-Order Thinking Skills, of which most questions (144) related to comprehension.

TABLE 3
TOTAL HOTS AND LOTS FREQUENCIES AND PERCENTAGES IN BLOOM’S TAXONOMY IN THE “JUST IMAGINE FOR 9TH GRADE” TEXTBOOK

Percentage	Frequency	Level of question	Level of thinking
5	10	Knowledge	LOTS
66%	144	Comprehension	
6%	13	Application	
77%	167	Total	
17%	38	Analysis	HOTS
4%	9	Synthesis	
2%	5	Evaluation	
23%	52	Total	

Table 3 shows that the more dominant level of the cognitive domain of Bloom’s taxonomy used in the textbook is lower order thinking skills (LOTS) rather than higher order thinking skills (HOTS). It can be

seen from the analysis results that 167 questions out of 219 reading comprehension questions (77%) were classified as LOTS. Only 52 questions (23%) were categorized as HOTS. The level that appeared most frequently was the comprehension level. These findings correlate with previous studies such as Freahat and Al-Faoury (2015); Igbaria (2013); Kencana et al (2022) and Muhayimana et al (2022). The textbook is intended for heterogeneous classes with advanced, middle, and weak students. Based on this, the textbook authors chose to emphasize the lower-order thinking process questions to suit the average student (intermediate or weak).

The evaluation and synthesis levels received the lowest percentages and frequencies, which were together lower than 6%. Low frequency of high-level learning was also found by Igbaria (2013); Apriani (2019) and Seif (2012). Since the textbook was designed for students whose mother tongue is not English, it can be concluded that the writers aimed for easier comprehension and coping. Students are more likely to accept easier learning materials with questions that request mid-thinking processes.

However, an interesting result is that analysis, one of the higher thinking skills, got the second place of all the other cognitive levels (17%). The researcher suggests several reasons for this. The first is that analyzing is the first level of higher thinking processes, which might be easiest for students to cope with. The second is that the authors may have chosen the analysis questions specifically because they may be easier for students to understand. The textbook authors might have concluded that the level of most students was the intermediate level, thus believing that these students needed to be more familiar with such types of questions.

CONCLUSIONS

This study showed that reading comprehension questions in the English textbook “Just Imagine” for the ninth grade covered all of Bloom’s taxonomy levels: knowledge, comprehension, application, analysis, synthesis and evaluation.

Regarding the findings of this study, it can be concluded that the reading comprehension questions dominated the low order thinking category, and only a small number of questions represented high order thinking. However, the activities were not fairly divided. This was proven by 177 activities, which were categorized as Lower Order Thinking Skills, while only 52 activities belonged to higher order thinking skills.

In view of the results, the researcher would like to make some suggestions that may be useful for many parties related to analyzing textbooks by using the cognitive domain level of Bloom’s taxonomy:

- For the textbook authors: Since the mindset of the 2013 English Curriculum is to emphasize Higher Order Thinking Skills, it is better not to focus on the lowest level. Most of the reading comprehension task questions should ask students to think more analytically and critically based on their own opinion. The questions need knowledge, comprehension, analysis, synthesis, and evaluation.
- English teachers should evaluate or check the contents of the textbook to see whether the material and exercises in the textbook are appropriate for the needs and abilities of their students.
- Textbook writers and English teachers need to increase their high-level thinking skills training, to facilitate their ability to train students to use Higher Order Thinking Skills.
- Readers of this study are expected to get some references in the selection of textbooks, about reading problems, and the importance of Higher Order Thinking Skills in education or society.

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APPENDIX 1

A Summary Table of all Wh- Questions from Each Learning Unit in the Textbook “Just Imagine for 9th Grade”.

Unit one			
No	The question	Level	Page
1	When can a friend cause disappointment?		12
2	What type of frenemy could get you into trouble?		12
3	Where did the two men meet?		19
4	What did Owens say about Long’s behaviour at the Olympics?		19
5	How did Long and Owens continue their friendship after the Olympics?		19
6	What message did Long want Owens to give his son?		19
7	Who did Hitler expect to win the long-jump competition? Explain.		20
8	Why was the German crowd shocked by Luz Long’s behaviour?		20
9	What surprised you the most about the athletes’ friendship?		20
10	What percentages of teens say that social networking makes them feel more depressed?		27
11	What is teens’ favourite way to communicate? What is their least favorite way?		27
12	What percentage of teens prefers to “talk “by texting?		27
13	Who does the word “we” refer to?		27
14	Why do you think Israelis spend more time on social networks than people in other countries?		27
15	How did you read the infographic?		27
16	Which number do you think the most important ?why		27
17	Where do Antonio and Felix live?		32
18	What did their coach tell them?		32

19	Why was this fight so important to Antonio and Felix?	32
20	What did Felix decide to do?	32
21	What did Antonio hope for?	33
22	What did Felix dream the night before the match?	33
23	How are the two boys different?	34
24	Who has a conflict in this story?	34
25	What is the conflict?	34
26	What does Antonio mean when he says: “We go all the way”?	34
28	Why do you think Felix goes to stay at his aunt’s house?	34
29	What other results do both boys hope for?	34
30	How would you feel if you had to compete against a close friend in a competition? What would you do?	34
31	How do you think the boys’ friendship will affect the match?	34
32	How do you think the match will affect their friendship?	34
33	Where did the fight take place?	34
34	Why were there going to be a lot of people at the match?	35
35	How many rounds would this match last?	35
36	What did the crowd think of their behaviour?	35
37	What did the boys continue to do after the match ended?	36
38	What happened when the referee turned to point to the winner?	36
39	Why do you think the boys were liked and respected?	36
40	If only one boxer could win the match, why does the last line say “the champions”?	36
41	What other examples of generating possibilities can you think of?	37
42	Why do you think the writer left the ending open?	37
43	How did you feel about the ending?	37
44	How did the skill of generating possibilities help you do the Post-Reading task?	37

Unit two

45	What surprised Ed when he got off the bus in Camana?	46
46	What did Ed do the day before he began his journey?	46
47	What did he do at the beginning of his journey?	46
48	What happened on that Thursday afternoon?	46
49	What noise did Ed hear as he was entering the forest?	46
50	Where did they get their water?	46
51	How long does the anti-venom medicine work?	46
52	How did Ed feel the next day?	46
53	What made it easy for Ed and Cho to walk?	46
54	What will happen if people keep cutting down the trees in the rainforest?	46

55	How far did Ed and Cho walk on the last day of their journey?	46
56	What happened to make it the best day?	46
57	Where has all the water gone?	46
58	How did Ed feel when he reached the Atlantic Ocean?	47
59	Why do you think Ed wrote about the cattle ranches? (6th of May 2010)	47
60	How long did it take Ed to reach the forest?	47
61	What information there helps explain Ed's feelings on that day?	47
62	What do you think the author's purpose was for writing this article?	56
63	Why is Israel mentioned in the article?	56
64	What does Ed Stafford have in common with Sting and James Cameron	56
65	What can you do to help save the rainforests?	56
66	What do the Surui people depend on the forest for?	59
67	What dangers did the outsiders bring with them?	59
68	Why was the chief's life in danger?	59
69	Who are the partners in the partnership?	59
70	What is the Surui tribe's new weapon?	59
71	What can we learn about the Surui from the Google map of their lands?	59
72	What has changed for the Surui since 1969?	
73	What is special about Chief Almir?	60
74	Why do you think the people at Google were so impressed by Chief Almir?	60
75	How is the Google map of Surui lands different from other Google maps?	60
76	How does having smartphones help the Surui protect their land?	60
77	Why do you think the writer wrote this article?	60
78	What do you think happened to them?	60
79	Which will help the Surui more – Google Maps or smartphones? Write a few sentences explaining your opinion	61
80	How many verses does the poem Earth Day have?	67
81	What two things does the poem compare?	67
82	What lines are repeated at the beginning and end of the poem?	67
83	What is the message of the poem?	67
Unit three:		
84	What were buttons made of between 1200 and 1600?	78
85	How were buttons useful to spies?	78
86	When did forks become fashionable?	78
87	What happened to the princess in Venice?	78
88	What did the Chinese use for bristles on their toothbrushes?	78
89	What did the Greeks use to make glue?	78
90	Who is Dr. Harry Coover?	78

91	How has glue saved lives?	78
92	Why aren't buttons a status symbol anymore?	78
93	Why do you think it took so long for forks to be accepted?	78
94	How are the old Chinese toothbrushes similar to toothbrushes today? How are they different?	78
95	Why do you think Dr. Coover's glue is considering one of the most important inventions of the 20 th century?	78
96	Which factoid was the most interesting to you? Why?	79
97	What other everyday object would you like to learn more about?	79
98	When was basketball invented?	89
99	When was the coat hanger invented?	89
100	How much was the prize the French government	89
101	How long did it take to solve napoleon's problem?	89
102	Where Albert J. Parkhouse?	89
103	What made him invent the hanger?	89
104	Who solved Napoleon's problem?	89
105	Which of the three inventions in the article was the most important to you? In your opinion which one was the most significant?	90
106	Which of the four people in exercise H3 followed this method to solve his problem? Explain.	90
107	Which sentences are true according to lines 1-10?	95
108	How could this skill help someone draw or build a Rube Goldberg machine?	95
109	Why you think people are so fascinated by Rube Goldberg's cartoons?	96
110	What do we learn about Giffen?	98
111	What did Giffen say about his glue?	98
29	What did Giffen do to show his glue is good?	98
112	How much money did Giffen make that day?	98
113	How long does the glue last?	98
114	What did miss Tibbs use the glue for?	98
115	Why did Scott buy the glue?	99
116	What did Scott forget?	99
117	What happened to Scott?	99
118	How did Giffen get people attention after he arrived in Horsham?	100
119	What is a Strap Box Flyer?	100
120	What does this show us about Giffen? What does it show us about the people who bought the glue?	101
121	What can we infer about Giffen from these sentences?	101
123	What do you think Giffen is most worried about?	101
124	What did Flinty have to do to make his invention work?	103
125	What did Giffen plan to do once he had the Strap Box Flyer?	103
126	How high did Giffen and Flinty fly?	104
127	What happened to Giffen's Strap Box Flyer?	104

128	How would you describe each character in the story?	105
129	Why did Flinty want to show his invention to Giffen?	105
130	How did Giffen plan to get away from Flinty?	105
131	What is the surprise at the end of part two?	106
132	How did the skill of explaining patterns help you understand the story?	106

Unit four:

33	1. What do we learn about heroes and heroines in lines 1-3?	114
134	In what way was Jane Eyre brave?	114
135	What skills does a hero or heroine need?	114
136	Who is your favorite hero or heroine?	114
137	Who is the hero? Describe him or her.	118
138	What is the quest?	118
139	What are the difficulties he or she has to face?	118
140	1. What did Percy learn the summer he turned twelve?	118
141	Why is the “gift” of obedience really a curse for Ella?	118
142	. How did Shrek’s attitude towards the other creatures in the swamp change?	118
143	Why do you think people enjoy reading about an unlikely hero?	119
144	What magical powers does Percy Jackson have?	126
145	Who did Rick Riordan create Percy Jackson for?	126
146	How long did it take Riordan to create the first story?	126
147	What did Rick Riordan do to make Percy more meaningful to his son?	126
148	How did Riordan’s experience as a teacher help him with the book?	126
149	Why are there questions in the first paragraph of the article?	126
150	2. Did Haley like his father’s story? What evidence in the article helped you answer?	127
152	In line 18, Riordan says “It’s not a bad thing to be different.” What can we infer about Riordan from this quote?	127
153	How did Haley change as a result of the Percy Jackson books? Use the skill of integration to answer.	127
154	What do you admire about Rick Riordan?	127
155	What made Princess Leonore sick?	134
156	Who got the King whatever he wanted?	134
157	Why does the King want the moon?	134
158	How did the Royal Wizard react to the King’s request?	135
159	How did the King feel?	135
160	What happened every time the King asked for the moon?	136
161	What does the Court Jester suggest?	136
162	How big is the moon according to the Princess?	136
163	What does she think it is made of?	136
164	What did the Court Jester do?	136

165	Which character(s) ...?	137
166	What did each character believe about the moon?	137
167	How did the King react to his daughter's illness?	137
168	What did the King ask the wise men to do?	137
169	What did he ask the Court Jester to do?	137
170	What is the King's problem?	138
171	How does he try to solve his problem?	138
172	In your opinion, why doesn't the King ask the Court Jester to get the moon?	138
173	How does the Court Jester approach the problem?	138
174	Which of the characters is the wisest in your opinion?	138
175	At the end of Part One, the King has a new problem. What is the problem?	138
176	How do you think the king will try to solve the problem?	138

Unit Five:

177	What is a cataphile?	150
178	What do cataphiles do during the day?	150
179	Why are their real names a secret?	150
180	What were some of the caves used for in the past?	150
181	. What objects have been found by cataphiles?	150
182	Why shouldn't you explore the catacombs on your own?	150
183	Which of these sentences present facts and which express opinions?	150
184	Why is it important to distinguish between fact and opinion in an article?	150
185	Why should tourists avoid the Metro during certain hours?	150
186	What "souvenirs" does the guide warn visitors not to take?	150
187	1. What can you say about all three tourist sites on page 148?	151
188	Which two tourist sites are the most similar? use the skill integration.	151
189	What are the differences between cataphiles and tourists to the other underground sites?	151
190	Which of the tourist sites on page 148 would you most like to visit?	151
191	Which site or sites would you avoid?	151
192	Which place is it?	160
193	What is special about Mammoth Cave?	160
194	Why did it take so long for the Eisriesenwelt Caves to become a popular site?	160
195	What is the problem in the Wieliczka Salt Mine?	160
196	What words and phrases are used to describe the Temples of Humankind?	160
197	What can tourists see in both the Wieliczka Salt Mine and the Temples of Humankind? Use the skill of integration.	161

198	What is true about Coober Pedy and PATH that isn't true about the other places? Use the skill of integration.	161
199	Which site impresses you the most? Explain why.	161
200	Which animals live under the ground? What do you know about them?	161
201	Which place or thing is it?	161
202	What can we infer from this (several different places are mentioned in lines 21-28)?	167
203	What information in the article did you already know?	167
204	Where did the astronauts go?	171
205	What had the Earth looked like 500 years before?	171
206	What had happened to the Earth?	171
207	What did the two astronauts want to explore?	172
208	What did Al think this room was?	172
209	What are the astronauts surprised to find?	173
210	What happened when Al opened a book?	173
211	What would Elwood like to see?	174
212	What came out of the pipe?	174
213	What did the astronauts have for lunch?	174
214	What things did you think the astronauts had found?	175
215	What other information helped you decide? Use the connection you made in exercise E2 to decide which rooms the astronauts visited,	176
216	Why do you think the astronauts in the story couldn't make the same connections you made?	176
217	Which of these facts from the present do you think the writer was thinking of when she wrote Back to Earth? Explain your choices.	176
218	What prediction does the writer make about the future?	176
219	How did the skill of making connections help you understand the story better	176

APPENDIX 2

Examples of Wh-Questions from Each Learning Unit in the Textbook “Just Imagine” for 9th Grade Students.

Unit three:			
No.	The question	Level	Page
1	What were buttons made of between 1200 and 1600?	Comprehension	78
2	How were buttons useful to spies?	Comprehension	78
3	When did forks become fashionable?	Comprehension	78
4	What happened to the princess in Venice?	Comprehension	78
5	What did the Chinese use for bristles on their toothbrushes?	Comprehension	78
6	What did the Greeks use to make glue?	Comprehension	78
7	Who is Dr. Harry Coover?	Comprehension	78
8	How has glue saved lives?	Comprehension	78
9	Why aren't buttons a status symbol anymore?	Analysis	78
10	Why do you think it took so long for forks to be accepted?	Analysis	78
11	How are the old Chinese toothbrushes similar to toothbrushes today? How are they different?	Analysis	78
12	Why do you think Dr. Coover's glue is consider one of the most important inventions of the 20 th century?	evaluation	78
13	Which factoid was the most interesting to you? Why?	Analysis	79
14	What other everyday object would you like to learn more about?	knowledge	79
15	When was basketball invented?	Comprehension	89
16	When was the coat hanger invented?	Comprehension	89
17	How much was the prize the French government	Comprehension	89
18	How long did it take to solve napoleon's problem?	Comprehension	89
19	Where Albert J. Parkhouse?	Comprehension	89
20	What made him invent the hanger?	Comprehension	89
21	Who solved Napoleon's problem?	Comprehension	89
22	Which of the three inventions in the article was the most	evaluation	90

	important to you? In your opinion which one was the most significant?		
23	Which of the four people in exercise H3 followed this method to solve his problem? Explain.	analysis	90
24	Which sentences are true according to lines 1-10? How could this skill help	application	95
25	someone draw or build a Rube Goldberg machine? Why you think people are so	Application	95
26	fascinated by Rube Goldberg's cartoons?	analysis	96
27	What do we learn about Giffen?	Comprehension	98
28	What did Giffen say about his glue?	Comprehension	98
29	What did Giffen do to show his glue is good?	Comprehension	98
30	How much money did Giffen make that day?	Comprehension	98
31	How long does the glue last?	Comprehension	98
32	What did miss Tibbs use the glue for?	Comprehension	98
33	Why did Scott buy the glue?	Comprehension	99
34	What did Scott forget?	Comprehension	99
35	What happened to Scott? How did Giffen get people	Comprehension	99
36	attention after he arrived in Horsham?	Comprehension	100
37	What is a Strap Box Flyer? What does this show us about	Comprehension	100
38	Giffen? What does it show us about the people who bought the glue?	Analysis	101
39	What can we infer about Giffen from these sentences?	Analysis	101
40	What do you think Giffen is most worried about?	Comprehension	101
41	What did Flinty have to do to make his invention work?	Comprehension	103
42	What did Giffen plan to do once he had the Strap Box Flyer?	Comprehension	103
43	How high did Giffen and Flinty fly?	Comprehension	104
44	What happened to Giffen's Strap Box Flyer?	Comprehension	104
45	How would you describe each character in the story?	Comprehension	105

46	Why did Flinty want to show his invention to Giffen?	Comprehension	105
47	How did Giffen plan to get away from Flinty?	Comprehension	105
48	What is the surprise at the end of part two?	Comprehension	106
49	How did the skill of explaining patterns help you understand the story?	Evaluation	106